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THE USE OF THE QUESTION IN CLASSROOM INSTRUCTION

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THE USE OF THE QUESTION IN CLASSROOM INSTRUCTION

The use of the question. The question is one of the most important devices at the command of the teacher for directing the learning of children. Its use may be discussed from two standpoints: (1) questioning by the members of the class, and (2) questioning by the teacher. The latter usually is thought of when the subject is mentioned. The former is, however, very important. This paper presents a limited discussion of questioning by the class, followed by a more detailed consideration of that by the teacher.

QUESTIONING BY THE CLASS

Importance of questioning by the class. A class that asks numerous questions due to an honest desire to secure information will learn, regardless of the teacher. If a class does not already have the questioning attitude it is worth the expenditure of a considerable amount of thought, time, and effort on the teacher's part to lead it to acquire this attitude. However, the mere asking of questions by the pupils is not the desired end. It is vital that the questions be of the proper sort.

The teacher's responsibility for stimulating questioning by the class. Every young child of normal or nearly normal intelligence naturally asks many questions and, if not discouraged by receiving little attention or unsatisfactory answers, he will continue to do so as he grows older. Even though his questions have been neglected by parents and other members of the home circle the tendency to ask them is still strong when he enters the public school. Therefore teachers cannot escape a portion of the responsibility when this tendency is discouraged. They should not merely avail themselves of it if it exists at the time pupils enter school but should encourage and develop it in the case of dull children and of those in whom it has been discouraged. A few suggestions as to how this may be done will be found in the next paragraph. Too many teachers feel that they ought not to take time to give satisfactory answers to pupils' questions and thus cause the children to decide that it is practically useless to ask questions in the schoolroom.

How to stimulate questioning by the class. One of the most effective ways of encouraging the questioning attitude on the part of the members of the class consists in the proper handling of the questions that are asked. It is not wise to give direct and complete answers to all questions, but the willing and skillful teacher, without doing this, can satisfy the pupils' quest for information. The habit of always giving direct answers does indeed stimulate questioning but it leads also to careless and unthinking questions and tends to prevent pupils from making independent efforts to secure the information needed. On many occasions the pupils may be told of sources where they can find certain desired items. In other cases the teacher may guide pupils to arrive at their own answers by suggesting methods of attack, by reminding them of similar discussions that have been considered previously, or by asking them a few questions that will guide their thinking along the proper lines. The teacher should provide ready-made answers when the information desired is possessed by herself alone, when an unwarranted amount of labor would be required on the pupil's part, or when the particular item, even though of minor importance, is connected with the work being done. In the case of such minor questions the teacher will find it advisable often to call upon another member of the class for the answer rather than to give it herself. In the use of all these methods as in the direction of all pupil activity, the teacher's aim should be to stimulate the pupil's thinking. Furthermore, she can lead the pupils to understand what kinds of questions are suitable in the schoolroom and what are not and she can guide them also as to the time to ask those that are appropriate. She should not bluntly refuse to consider even inappropriate questions, but could perhaps reply with a tactful remark such as: "That's an interesting question but it doesn't seem to be connected with what we're doing just now. Won't you ask it again at the beginning of the next period?" Indeed, she may well remember to bring it up herself at a convenient hour. She should be willing also, before the sessions begin, at recesses and other similar times, to answer questions on which recitation periods should not be spent.

The problem of stimulating the questioning attitude in the case of individuals or of whole classes in which it has been persistently discouraged is much more difficult than that of maintaining the natural, unspoiled attitude. It is, however, possible even in the upper grades to revive to a considerable degree an attitude which has been

well-nigh submerged. Sometimes each member of the class may be required to prepare one or more questions as part of the assignment. These questions may deal with the material actually in the textbook or with supplementary or related topics, and should require interpretation, comparison, criticism or some other form of thinking, not mere matter-of-fact answers. Another device is for the teacher to assign or present material so interesting and yet with such obvious gaps that the curiosity of the pupils is aroused, and they are led to ask questions. Individual assignments also may be very helpful. A short interesting report on a topic connected with the general subject being studied will often lead other members of the class to ask questions connected with the material presented in the report. In any situation the teacher should avoid making the class feel that it must move at high speed in order to cover a certain amount of ground, for such a feeling very definitely discourages questioning. She should bear in mind that her job is to teach children rather than a certain number of pages in the text.

Kinds of questions asked by the pupils. It is important not only that the teacher stimulate the pupils to ask questions but also that she guide them to formulate suitable questions. The most important guiding principle for doing this has been indicated in the preceding discussion. The asking of questions should not be a substitute for thinking but should be rather the result of mental activity. In other words, the questions asked should spring from the work that the pupils have been doing. The pupils should learn also to attack those questions which arise in their own thinking and to bring only those which they cannot solve before the class.

The questions asked by pupils should result usually from the development of the critical attitude. Pupils should be trained to maintain this frame of mind during both study and recitation, to question the truth and accuracy of statements open to such questioning. Ordinarily statements of fact should not be thought of in this way but statements of probability or possibility, motive, interpretation, supposition, etc. should be. There is no reason why a pupil should question the statement that Columbus discovered America in 1492, but he may well ask concerning the assertion that if he had not discovered it someone else would have within the next five years. Questions should arise also in connection with the study of books or articles treating of the same topic. These will deal to some extent with differences in interpretations and explanations or even in facts,

but may be concerned also with differences in treatments of a topic which are not at all contradictory to each other. The pupil may well wonder, for example, why one sketch of the life of Benjamin Franklin devotes much attention to his boyhood days, whereas another passes over this period of his life in a few sentences. In case material that is familiar in daily life is being studied, numerous questions should arise. For example, when levers are studied in physics many pupils can undoubtedly call to mind applications of the principle of the lever which are unlike those described in the textbook and which therefore naturally lead to questioning. In many textbooks, especially in histories, statements of facts are given with none of the reasons or causes. Such cases should arouse the questioning attitude. Thus, if the bare statement that one side won a certain election or a certain battle is given, perhaps accompanied by some of the details but by no suggested reasons, the latter should be sought.

The writer does not wish to be understood as meaning that all questions asked by members of the class should be of a critical nature. Some may be merely requests for information that cannot be found by the pupil and that is of interest in connection with the class work. Others may arise spontaneously during the recitation period, often dealing with some very minor point that is of interest only at that time.

QUESTIONING BY THE TEACHER

Types of questions used by the teacher. Several different schemes of classifying questions have been suggested by writers on the subject. Probably the most practical plan is that suggested by Charters. He mentions three general classes: test questions, which are intended to find out how well the pupils have mastered the material assigned; developmental questions, whose purpose is to guide the pupils' thinking; and informational questions, which are asked because the teacher really wishes to secure information for herself or to have it presented to the other members of the class. Most teachers over-use test questions, make only a limited use of developmental questions and rarely ask informational questions. Continued practice of this sort has a very great effect in lessening the pupils' enthusiasm and desire for self-expression. They come to regard the class period as a time when they are asked questions in connection with the assignment or when more material is given them and not as an occasion for pursuing the quest of knowledge which they have a

desire to acquire. It will be seen later that the purpose of the question, whether test, developmental or informational, not infrequently determines how it should be formulated.

Test questions not limited to memory work alone. Test questions, as stated in the preceding paragraph, are intended to find out how well the pupils have mastered the material assigned. This statement must not be interpreted too narrowly. Test questions should be used to find out not merely how accurately facts have been memorized but also how well they can be applied to new situations. In most cases the best test questions are of the latter sort. For example, a more valid measure of a pupil's practical knowledge of the multiplication table is secured when he solves problems requiring multiplication than when he repeats a portion of the multiplication table. Likewise, translating a selection is a more valid test of ability in a foreign language than giving the declension of a noun or the conjugation of a verb. The fact that a question tests ability does not prevent it from fulfilling a developmental function also.

The place of developmental questions. In speaking of developmental questions the writer has in mind especially those that are used to develop or bring out new subject-matter and that are therefore usually used in making the assignment. In a more general way developmental questions may be identified with the developmental lesson, which has been so widely advocated by the Herbartians and which, of course, includes and follows the five formal steps of preparation, presentation, comparison, generalization, and application. In this more general sense, developmental questions have probably been over-used by many teachers. It must not be assumed that it is always, or even most often, better to develop given material completely than to present it in final form. Many facts and rules are best acquired by pure memory. Especially is this true in the case of children in the elementary grades.

On the other hand, developmental questions do have a real place in teaching, although no set of hard and fast rules can be laid down for their use. It may, however, be taken as a guiding principle that when the explanation or reason is important the developmental method is usually good, but that when merely information is the aim it should rarely be used. Furthermore, its use should depend upon the age, ability and previous training of the pupils as well as upon the subject-matter itself. A rule in formal grammar may appropriately

be developed in a high-school class but should be merely learned and applied in an elementary class. The especial use of developmental questions which the writer wishes to emphasize is that connected with the assignment. Its purpose is to make sure that the pupils understand the new material to be studied. For example, if the pupils are fairly familiar with English grammar most grammatical assignments in a foreign language may well be developed from this previous familiarity. A few minutes used in this way while assigning the lesson will frequently save a much longer period of time in study or perhaps even in the following recitation.

Frequent use of informational questions. The opportunity of asking for information not already possessed by the teacher varies greatly with different subjects. In some, such as Latin, mathematics and grammar, it is relatively rare that pupils can contribute anything not already known to the teacher. On the other hand, the situation is very unusual if the members of a class in nature study, agriculture or history cannot, from time to time, contribute items of information which are new to the teacher. The opportunity of securing information unfamiliar to other members of the class is much wider, though it too depends largely on the subject-matter. The ability of the pupils to present worth-while material also varies widely with their environment and with the amount of travel and reading which they have done. Teachers often hesitate to call for such information because they fear their prestige will be lowered if they admit that the pupils know facts which they do not, because they believe the amount of time consumed by the pupils is too great in proportion to the value of the contributions, or because they feel that drill on textbook matter or their own discussions would be more profitable to the class. The fear of losing prestige is practically groundless and applies only in case a teacher is not well informed in general regarding her subject. There is some validity to the other reasons advanced, but their real force is that this method should be used with care rather than discarded altogether. Giving pupils an opportunity to supply information is almost certain to result in an increased interest in the work of the class.

Certain prerequisites of good questioning. Skilled questioning demands at least three qualities on the part of the teacher; (1) rapid and clear thinking; (2) a keen sense of relative values; and (3) skill in expressing or wording questions. This does not mean that all three

of these qualities are equally essential in asking questions of different types. For example, a teacher, without rapid thinking or skillful wording, may prepare and ask an effective set of test questions. To be a master in the use of all kinds of questions, however, one must possess these three qualities. The first is essential because it is impossible to plan a complete series of questions in detail. All the answers that pupils will give and all the resulting difficulties that will arise cannot be anticipated even by the most experienced teacher. No two classes are the same. The second is required for at least two reasons. In the first place time is not available for asking questions concerning everything in the content of the course and therefore those things that are most important must be selected. In the second, the teacher must evaluate almost instantaneously answers of many degrees of merit. This requires not merely rapid and clear thinking but also a keen sense of relative values. The third quality, that of skillful expression, is necessary in order that the questions be understood and that their form be a model of language usage for the pupils.

Central questions prepared in advance. It is probably wise for an inexperienced teacher to prepare in advance a complete and detailed list of the questions she wishes to ask. This is no longer essential when she becomes fairly experienced, but it is highly desirable that she predetermine the central or main questions. These should be organized sequentially, should form a unified series and should deal with the main points of the subject-matter to be covered. For example, the discussion of the following list of questions might serve as the backbone of a recitation on the life of Washington:

1. Give an account of Washington's life before the beginning of the Revolution.
2. Discuss his services to the colonies during the war.
3. What part did he play in constructing and securing the adoption of the Constitution?
4. Outline his presidential career.

Around these central questions should be arranged the minor and more detailed questions, which may, to some extent, be thought out while the recitation is in progress. The teacher in planning the lesson may frame enough of these detailed questions to use during the whole recitation period but, if so, she must be ready to modify them to suit the situation. Needless to say these minor questions should not attempt to cover all the detailed points contained in the assigned material but should make merely a sampling of them.

Topical questions generally the best, except for drill. Except when the purpose is drill, questions usually should be topical in nature. That is, they should require that a given topic be discussed at some length. In doing this the pupils themselves must organize the material. The four questions given above on the life of Washington are all topical in their nature. It is much better to ask a single question of this type than to use a series, each of which calls for one detail. For example, "Discuss the character of Napoleon," is better than, "Was Napoleon ambitious? Was he scrupulous? Was he energetic? Was he patriotic? etc." The use of topical questions implies that the number asked will be comparatively small, likewise that a few moments will be given the pupil to think over and organize his material before he begins to reply.

Alternating questions undesirable. Alternating questions, that is, those that must be answered by "yes" or "no" or by one of the two other alternatives, should be avoided. Pupils, even if they know nothing about the subject, have one chance out of two to guess the correct answer. A question such as "Did Jefferson or Hamilton contribute more to the stability of our early government?" is of this type. If, however, it is followed by "Why?" or "Give your reason" it becomes equivalent to a thought question and is acceptable. The use of alternating questions can usually be avoided by rewording them. For example, instead of asking, "Is the biceps muscle in the upper arm?" the teacher may say, "Where is the biceps muscle located?" In written tests consisting of a fairly large number of questions the alternative form may be used, as the method of scoring largely takes care of the possibility of guessing correctly.

Leading questions rarely in place. Under most conditions leading questions, that is, those which give hints as to the correct answers, are out of place. Such a question as, "Longfellow wrote 'The Village Blacksmith,' didn't he?" is practically worthless. Many teachers who recognize that a question such as this has little value overlook the fact that the form of the question, "Did Longfellow write 'The Village Blacksmith'?" is also essentially leading in its wording. Unless the answer were affirmative such a question would rarely be asked and most pupils know this. Occasionally in the case of bashful or timid pupils who need to be encouraged, leading questions may be used legitimately, but should not be long continued with any one pupil. There is likewise a place for them in developing new material, in which case, however, they really amount to statements.

Elliptical questions to be avoided. Another form of question that should be used rarely if at all in oral work is the elliptical question, that is, one containing a statement with a word or two left out which the pupils are to supply. For example, "The poet says that the muscles of the blacksmith's arms are strong as ——— (what?)" is not nearly so good as, "What does the poet say of the blacksmith's muscles?" Such questions are liable to suggest the answer by their wording and to cause the pupils to guess rather than to recall or think. As is the case with alternating questions, elliptical questions also may be used in written tests.

Multiple questions usually confusing. Multiple questions also are to be avoided in most cases. Ordinarily they serve to confuse the pupils, to render them doubtful as to what is wanted. Probably their only justifiable use is for developmental purposes. A series of several may be asked, of which the last is the only one to which an answer is expected. The others serve to guide the attention of the pupils along the right lines in order to prepare them for the final question and must deal with material comparatively well-known by the class. The following questions illustrate such a series: "What is the product of +8 by+6? of +5 by+4? of −8 by−6? of −5 by−4? What rule can we make about the signs of the products of numbers with like signs?"

Drill questions asked rapidly. Drill or mere factual questions should usually be asked and answered rapidly. In this respect they are directly the opposite of topical questions, upon which time for thought should be given. They are generally short and require short answers. If the pupil first named cannot give the answer immediately another should be called upon. Such more or less isolated facts as the products of the multiplication table, important historical dates, foreign vocabularies, etc. represent the types of material best suited to drill questions.

Conciseness in wording questions. One requisite of a well-stated question is that it be concise; it should be stated in as few words as are consistent with clearness, definiteness and completeness. For example, the form "What is the sum of 9 and 12?" is to be preferred to "How much do we get when 9 and 12 are added together?" Similarily, "What effect did his daughter's singing in church have on the blacksmith?" is better than "When the blacksmith went to church on Sunday and heard his daughter singing in the choir, how did her singing make him feel?"

Definiteness in statement of questions. A question should be definite. This does not mean that it should be detailed but that it should be so worded as to avoid any confusion in the minds of the pupils. The very common practice of beginning questions with such expressions as "What about" and "How about" is likely to cause indefiniteness. For example, the question "What do you think about Grant?" would be much more effective undoubtedly in stimulating the pupils to guess than to think profitably concerning the answer. It is true that there are some occasions when these expressions are allowable. If reading about Grant outside the text has been done it would be permissible to ask "What can you tell us about Grant?" In such a case the pupil is expected not to give a limited number of definite facts but to contribute anything worthwhile that he knows. On the other hand, if the class has been instructed to learn the important dates in Grant's life the question, "What about Grant?" would be decidedly poor.

Relevancy of material in questions. A question should not contain irrelevant material. Its inclusion sometimes tends to make the question more of a puzzle or a test of general intelligence than a measure of what is known concerning the subject-matter. The question, "Why was Washington, who later became our first president, chosen to command the colonial army?" would be much better in the shorter form, "Why was Washington chosen to command the colonial army?" It is especially common for long questions containing irrelevant material to be found in arithmetic.

Avoidance of language of the book. In general, questions should not follow the language of the textbook too closely. If they do so they tend to elicit pure memory responses rather than to stimulate thinking. Even if statements which have been memorized are desired, they should be obtained in response to any combination of words having the same meaning rather than to merely a given set of words. For example, the question, "Where does the village smithy stand?" would recall often the first two lines of the poem and thus the answer, although the pupils might remember merely the words and not really know the thought. If "Where is the blacksmith's shop located?" were asked, the correct answer would show that the thought was understood.

Repetition of questions and answers an uneconomical habit. The teacher should not drift into the habit of repeating either her

questions or the pupils' answers. This practice tends to increase inattention and to engender a careless attitude on the part of the pupils, since they know from experience they will probably be given a second opportunity. Such a habit, especially that of repeating answers, is easily acquired and wastes much time. Of course if poor enunciation, obscure wording, or some confusion in the classroom results in a lack of understanding of the question, it should be repeated. The teacher, however, should be able to control the first two obstacles to clear understanding. It is sometimes good practice to restate a distinctly difficult question, or one dealing with new material. In case a pupil's answer is not understood by the members of the class it should be repeated by the pupil himself rather than by the teacher. Occasionally the teacher may repeat a pupil's answer in part, elaborating it by adding details that she alone can give or that are not worth the time required to elicit them from the class.

Confidence on part of teacher secures better answers. A teacher should ask questions confidently, as if she expected a correct answer. It is difficult to do this when calling on certain individuals, but the confident asking of questions often reassures and encourages even those pupils, who might otherwise become confused and give poor answers, to do fairly well and in time to acquire confidence in themselves. Here again, however, there is place for an occasional exception. The pupil, who thinks he knows more than the teacher or who tries to bluff, probably should be asked some questions in a manner which implies that in the teacher's opinion he cannot give the correct answer.

Pursuit of individuals sometimes necessary, but should be minimized. Class time should not be wasted in pursuing individuals. That is to say, pupils who refuse or are unable to answer questions should be passed over usually with a minor expenditure of time rather than be given the attention of the teacher and of the class in the hope that they can be guided to give correct answers. Individual assistance is needed but should be given, in so far as there is opportunity, outside the regular recitation period. In case there is no such opportunity a moderate amount of time must be devoted during class to this use. A closely connected principle is that a teacher should not insist upon pupils trying to answer questions when they cannot do so, except when they probably know the correct answer but are too timid to speak. Even in such a case encouragement rather than in-

sistence should be used. Insistence upon answers is likely to result either in the encouragement of bluffing and guessing or in the provoking of obstinancy and surliness.

Commendation and reproof should be limited and discriminatory. A teacher's commendation for good answers and reproof for poor ones should be limited and adapted to the individual members of the class. However, one of the most useful plans for stimulating a critical attitude on the part of the class and for leading its members to think is to have the answers evaluated and criticized by other pupils. Many teachers have the habit of calling for class criticisms of answers that need correction but not of those that are satisfactory. This procedure at once informs the class of the teacher's judgment and thus materially lessens the critical ability required for discussion. If there is not time for evaluation of all responses, the teacher should call for criticisms of some unsatisfactory and of some satisfactory answers. It must not be thought, however, that commendation and reproof should never be given in class. An answer that is unusually good, whether it is intrinsically of high quality or of lesser merit but unusually good for the individual making it, should receive usually a brief word of commendation. Likewise, poor answers should sometimes be reproved. In the case of pupils of superior ability who are not working up to their capacities and in the case of those who are making no serious effort, a few words of reproof often are not misplaced. If, however, either commendation or reproof is very common most of the force is lost.

Adapting questions to the class. It seems self-evident that questions should be adapted to the knowledge and experience of the class, yet this principle is frequently violated. It is not desirable that all questions be easy enough for the poorest members of the class to answer correctly but merely that almost all come within the ability of a number of the pupils. Some should certainly be easy enough for the poorest pupils and likewise some should be hard enough to test the ability of the best pupils. In pursuance with this latter principle a very good pupil may occasionally be asked a question which likely cannot be answered correctly by any other member of the class.

Addressing questions to the group rather than to individuals. Questions should be addressed to the group, that is, to the class as a whole. Two means of accomplishing this are, (1) to observe the principle just discussed that the question be adapted to the ability of

the class, and (2) to state the question before indicating the pupil who is to answer it. This latter procedure, as no pupil is certain that he will not be called upon, tends to keep the attention of all members of the class. An exception may be made in the case of timid pupils who would be dismayed by having their names called after a question had been asked but who by being named first are given a brief opportunity to collect their thoughts and are encouraged to prepare their answers. It should not be necessary to continue this practice with any one individual for a very long period of time.

Distribution of questions among members of the class. One of the most important principles to be observed in questioning, especially in asking test questions, is that there be a proper or fair distribution among the pupils. This, in the writer's opinion, does not mean an absolutely random distribution. It is probably wise to distribute questions, especially test ones, at random during a portion of the recitation period. A pack of cards upon which the pupils' names are written may be shuffled or some other similar means used for this purpose. At other times more attention should be paid to adapting the questions to the individuals composing the class. The duller pupils should receive more than their proportional share of the easy questions and the brighter ones more than their share of the harder questions. Thus the duller pupils, by being able to give some satisfactory answers, are encouraged and the more gifted, by being required to use their superior ability, are stimulated. The actual number of test questions asked of each individual in the class ought to be approximately the same. As regards the other types, developmental and informational, the same rule should probably apply though with a more liberal interpretation of "approximately." In addition to distributing questions at random and according to individual needs there should be occasions when volunteers are allowed to answer. Most teachers permit this but in many cases a few of the brighter pupils volunteer almost all the time and answer most of the questions. This is due partly to the fact that volunteers often are called for on the hardest questions and partly, to the fact that the brighter pupils think more quickly and are more eager to answer than the dull ones. The teacher should see to it, however, that a number of the questions asked of volunteers are easy enough for the slower pupils and that this group is actually permitted to answer them. Another point to mention in connection with the distribution of questions is that no fixed order or rotation should be observed.

If this is done each pupil knows in advance just when he is to be called upon and, having answered his question, can withdraw his attention from the recitation until his turn comes again. Even when a fixed order is not being followed a pupil who has just recited has a tendency to turn his attention elsewhere, as he thinks he will not be called upon again soon. It is therefore a good habit occasionally to ask a second question of a pupil within a short time after his first answer in order to impress upon him that he is held responsible during the entire recitation.

Pupils' answers to questions need attention. The matter of answering questions is one that has received comparatively little attention in educational thought and literature. Many teachers who are skillful in asking questions give no thought or attention to the problem of teaching pupils how to answer them. It is not the purpose of the writer to enter into a detailed discussion of this matter, but he wishes to suggest its importance and to mention a few general principles that may be considered.

In the first place, a number of the principles that apply to questioning apply also to answering. Pupils should be required to give concise, well-worded, clear, and complete answers. Complete answers should not be interpreted to mean that answers must be in complete sentences, however. There is some justification for requiring this in the case of persons learning another language or of young children learning their own language, but with most pupils this justification certainly does not exist above the middle elementary grades. In many situations, the requiring of complete sentence answers results not only in a waste of time but also in a stilted and formal recitation. For example, if "What is the sum of 6 and 3?" is asked, to accept "9" as the answer is much better than to require, "The sum of 6 and 3 is 9." Likewise, if a French class is given the question, "What is the word for pen?", the answer "la plume" should be accepted instead of requiring, "The word for pen is la plume," or "La plume means the pen."

It is a very common practice to call for simultaneous or concerted answers. In most cases such responses result in a volume of noise out of which practically nothing can be distinguished by a person who does not know the answer to expect. Frequently pupils have erroneous ideas concerning the correct pronunciation of some words or concerning some fact and, although the answer is given in

concert time and again, they never detect the difference between the correct and their own incorrect idea. The writer does not mean to say that simultaneous answers should never be called for but that their use should be infrequent. One occasion when they may well be used is in assigning vocabularies and paradigms in a foreign language. The teacher may pronounce the new word or repeat the paradigm and then, perhaps after calling upon one or two pupils to pronounce it first, have the class do so in unison. When, however, the recitation is held to determine how well this material has been acquired individual answers are in order. Another occasion for the use of concerted answers is in the case of a pupil who does not know a point that is known by practically every member of the class, and who may be stimulated to learn if he sees that he is almost the only one who does not possess certain information.

The whole problem of teaching pupils how to answer questions is rather closely bound up with that of teaching them how to study. One of the big tasks is to teach them where to find the material to use in answering questions and how to deal with it when found. However, it is not possible to go further into this matter at this time.

Self-improvement in questioning by teachers. In order to guide a teacher who wishes to improve her questioning, a suggested procedure is given below. She should first review the principles of good questioning and analyze her own questioning as best she can in the light of these principles. Next she should make a list of those points in which she believes she is least effective. Finally she ought to concentrate upon some one of these principles for a short time, say two weeks, and endeavor to make as much improvement as possible. During this period she should from day to day review the questioning she has just done and see if she is making definite improvement and if not, why. After such a period of concentration upon one principle she may take up another, then another, and so on. From time to time a check-up should be made to provide against relapses into old and faulty habits temporarily broken during the periods of concentration. These check-ups may show that second periods of concentration are needed upon certain principles. This whole procedure can be made more helpful and effective if, in addition to her own criticism, the teacher has the benefit of that of an impartial and capable observer.

Selected references dealing with questioning. Although the writer has attempted to present a fairly detailed list of rules that should govern good questioning with a brief discussion of each, a much more extended treatment of the subject probably would be found profitable. The following references do not in any sense constitute a complete bibliography but are distinctly helpful and are well adapted to supplement the material which has been presented in this circular. The monograph by Miss Stevens is distinctive in that it presents a study of the question as actually used in a number of recitations. The other references contain more general discussions.

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